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(54) METHOD FOR HANGUL INPUT IN A MOBILE STATION

Abstract

Machine Translation

Human Translation

- 1 The present invention relates to the method for inputting Hangul according to the Hangul handwriting order by using a consonant allocated to the key matrix of the mobile communications terminal and vowel, in which as to the input method of the Korean alphabet using a consonant allocated to the input method of the Korean alphabet is the key matrix of the mobile communications terminal and vowel of the mobile communications terminal, the first vowel, the second vowel, and the third vowel are assigned to the vowel key of 3 so that a vowel be inputted by a combination according to the Hangul handwriting order. A consonant is input elated by notes being allocated in the former of the seventh consonant, corresponding to the consonant key of 7 on a one-to-one basis through the first and consonant, and Hoo by the selective combination of the book on strategy key and the pressed additional letter stroke key so that the consonant allocated in the character key in advance be input. Here, the third vowel through the first are characterized that —, ·, and the consonant c | vowel, 7 are made. According to this the present invention, the vowel of 3 and consonant character key of 7 are put in the key matrix of the terminal on a one-to-one basis. A vowel is completed by the combination of the vowel of 3. And a consonant is completed by the selective combination of the inputted keies in a vowel and these formers of 7, and Hoo. In that way the mobile communications terminal in which ***, a consonant and vowel are inputted according to the letter handwriting order is provided, the combination has.

Representative Drawing(s)

Fig. 4

Description

- Brief explanation of the drawing

- 3/21/2007

- 16 It was comprised of the main processor unit (1), and the key of the some extent thing including the screen control key, the numeric key and input completion key etc. it is connected to the main processor unit (1) and it was comprised of the key input unit (2), the liquid crystal display (3), and the memory (4) of being connected to the main processor unit (1) and having the hangul font built in. The main processor unit (1) as shown in Fig. 1, the general apparatus inputting hangul of the terminal controls the system of the personal communications system. As to the key input unit (2), a user inputs the key value. The liquid crystal display (3) is connected to the main processor unit (1) and the key input unit (2), and indicates the result processed at the main processor unit (1), and marks the key value inputted to the key input unit (2).
- 17 In this way, if a user inputs a number or Hangul through the key input unit (2), the main processor unit (1) processes the inputted key value. The inputted number like that indicates in the screen (3). The comprised and general personal communications system searches the key value which is inputted by using the hangul font which is built in the font memory (4) and the comprised and general personal communications system is converted according to the Korean input inner automata by the Korean input key from the Hangeul combination type code into the unified code and the inputted Hangul indicates in the liquid crystal display (3).
- 18 Fig. 2 is the first preferred embodiment for showing the input method of the Korean alphabet of the conventional mobile communications terminal. It is the drawing showing the key matrix.
- 19 Firstly, if the character element allocated to numeric key is looked at, it is the structure in which 'ㄱ, ㅋ' etc. are arranged in 1 No. key in 'ㄱ, ㅋ', and 2 No. key in 'ㄴ, ㄷ, ㄹ', and 3 No. key in 'ㄴ, ㄷ, ㄹ', and 4 No. key in 'ㄴ, ㄷ, ㄹ', and 5 No. key in 'ㄴ, ㄷ, ㄹ', and 6 No. key in 'ㄴ, ㄷ, ㄹ', and 7 No. key in 'ㄴ, ㄷ, ㄹ', and 8 No. key in 'ㄴ, ㄷ, ㄹ', and 9 No. key in 'ㄴ, ㄷ, ㄹ', and 0 No. key. Capital and small letter of the alphabetic letter and Korean to English conversion are supported to * key. It is inputted to the # key to the between letter row.
- 20 And in keies (1,2,3,4,5,6,7,8,9,0), since a consonant, and a vowel are assigned to 3 amendment plan side on the corresponding to character element is changed according to the times pressed of the special key and the corresponding to character element is inputted the character element is found and it is necessary to have a user inputs.
- 21 In case of completing Hangul called this by making use of this key "for example" to be the ream moon arch it is necessary to have the key input as follows.
- 22 "Example" It is inputted to the input of the numeric key 4 burn and 4 burn and 0 burn and 0 burn and the increment key. And "****" is completed to the input of the numeric key the second and the second and 8 burn and the second and the second and # key. And "****" is completed to the input of the numeric key the second and 8 burn and the second and the second and # key. And the letter heat called this which "side" is completed to the input of the numeric key the third and 7 burn and 7 burn and 7 burn and the first and the first and # key, in this way, is completed "for example" key input of the total 23 burn is needed.
- 23 But there is a problem that it is difficult like the drawing of Fig. 2 that a user memorizes a keyboard because the character element of 3 amendment plan is nearly allocated in all keies. Due to this, the input time is lengthened the times which has to press the key when inputting and, the character element is naturally increased.
- 24 Fig. 3 is a drawing showing the second preferred embodiment of the input method of the Korean alphabet of the conventional terminal. It is the drawing showing the key input unit (2) which is the key matrix of the terminal.
- 25 Firstly, if the character element allocated to the numeric key of the key matrix is looked at, it is the structure in which 'ㅇ, ㅁ' etc. are arranged in 1 No. key in 'ㅇ, ㅁ', and 2 No. key in 'ㅇ, ㅁ', and 3 No. key in 'ㅇ, ㅁ', and 4 No. key in 'ㅇ, ㅁ',

5 No. key in 'ㄴ, ㄹ', and 6 No. key in 'ㄷ, ㅌ', and 7 No. key in 'ㅂ, ㅍ', and 8 No. key in 'ㅅ, ㅎ', and 9 No. key 0 No. key. Capital and small letter of the alphabetic letter and Korean to English conversion are supported to inputted to the # key between the letter.

- 26 Here, a vowel is assembled by using 'ㅇ' which is the configuration of a vowel arranged in 1, 2, 3 No. key 'ㅇ', That is, it assembles to the successive input of 'ㅇ' and 'ㅇ' to 'ㅇ'. It assembles to 'ㅇ', 'ㅇ' and the successive 'ㅇ' to 'ㅇ'. And it assembles to the successive input of 'ㅇ' and 'ㅇ' to 'ㅇ'. And it assembles to the input which 'ㅇ' and input of 'ㅇ' to 'ㅇ'. And it assembles to the successive input of 'ㅡ' and 'ㅇ' to 'ㅓ'. And it assembles to and the successive input of 'ㅡ' to 'ㅕ'. And it assembles to the successive input of 'ㅇ' and 'ㅡ' to 'ㅗ'. And it is consecutively, sequentially, serially combined to an input of 'ㅡ', 'ㅇ' and 'ㅇ' to 'ㅗ'.
- 27 In case of completing with the letter heat by using, and the numeric key of Fig. 2 "for example" it is necessary the key input as follows.
- 28 "Example" It is completed to the increased numeric key 0 burn and the second and the second and the first a burn. And "****" is completed to the numeric key 5 burn and 5 burn and the third and 5 burn and 5 burn. "****" is completed to the numeric key 6 burn, 3 burn, 5 burn and 5 burn. And the letter heat called this which "side" is completed to the numeric key 0 burn and 0 burn and the second and the second and the first and 5 burn, in tl is completed "for example" the key input of the total 20 burn is needed.
- 29 But because it has to assemble after the consonant allocated to a plurality of is the character key as to the input method of the Korean alphabet, illustrated the method for inputting vowel is simple being many times repeated selecting, the key which a user has to press is increased. Moreover, there is a problem that it is difficult to the reduction of the hangul input time.
- 30 Therefore, conventionally, there is a problem that the consonant of Hangeul a cranium and three consonants assigned to the character key. Therefore it is difficult with number. Which a user easily cannot find and which remembers this or which a user learns.

Technical challenges of the invention

- 31 An object of the present invention are to provide the input method of the Korean alphabet of the mobile communications terminal which is worked out in order to solve the above-described conventional problem, and assigns the third vowel through the first for the Korean vowel input to the key of 3 with one to one, and it assigns essentially single consonant of 7 to the key of 7 on a one-to-one basis and it inputs the consonant which is not allocated by the former of the consonant key, and a combination with the additional letter stroke key / book or key selected in Hoo, and in that way it assigns a consonant and vowel to the numeric key of the key matrix or to-one basis and a user easily memorizes and a user is cooked.
- Structure & Operation of the Invention
- 32 The input method of the Korean alphabet of the mobile communications terminal for the above-described object achieving is characterized that as to the input method of the Korean alphabet using a consonant allocated to matrix of the mobile communications terminal and vowel, the first vowel, the second vowel, and the third vowel assigned to the vowel key of 3 so that a vowel be inputted by a combination according to the Hangul handwritten order. A consonant is input related by not being allocated in the former of the seventh consonant, corresponding consonant key of 7 on a one-to-one basis through the first and consonant, and Hoo by the selective combinational book on strategy key and the pressed additional letter stroke key so that the consonant allocated in the character in advance be input.
- 34 Preferably, the third vowel through the first is done by a feature with — to assign to the numeric key 1,2,3 of t

numeric key 3,6,9 of 3 row of ㅣ vowel, the key matrix or 1 heat.

- 35 Preferably, 7 consonants is characterized that it is made.
- 36 Preferably, the additional letter stroke key is characterized that it assigns to the Appendix (*) key in order to be pressed by the former of a consonant. And the book on strategy key assigns to the sharp key (#) in order to be pressed by the Hoo of a consonant.
- 37 It is the same as that of the next time referring to the figure if it illustrates for the input method of the Korean alphabet of the mobile communications terminal according to the present invention embodiment constructed as described above.
- 38 Fig. 4 is a drawing for showing the input method of the Korean alphabet of the terminal according to the present invention embodiment. It is the drawing showing 3×4 numeric key matrix of the terminal.
- 39 Referring to Fig. 4, if the configuration of the character elements allocated to numeric key matrix is looked at, point-to-point mapping and ㄴ consonant is prepared in the numeric key of 7. And it is the point-to-point mapping of the negative principle in nature is allocated in the numeric key of 3 with —. And the book on strategy key is allocated in the asterisk key (*) in the additional letter stroke key, and the sharp key (#).
- 40 Here, 7 consonants is characterized that it is a thing done by a feature. And the consonant key of 7 is allocated 1,2,4,5,7,8,0 key of the dozen key matrix.
- 41 And the additional letter stroke key prepares in the asterisk key (*). The book on strategy key (#) is allocated in the sharp key (#). It is pressed by the former or the Hoo of the consonant key.
- 42 It is the same as that of the next time referring to the figure if it illustrates for the input method of the Korean alphabet of the mobile communications terminal according to the present invention as described above.
- 43 Firstly, as shown in Fig. 4, in the numeric key 1,2,4,5,7,8,0, it is the point-to-point mapping and the Hangul single consonant (ㄱ, ㅋ, ㆁ, ㄷ, ㅌ, ㄹ, ㅇ, ㅈ) of 7 is allocated. And the numeric key 3,6,9 is the point-to-point mapping of the first vowel or the third vowel (ㅡ, ㅜ, ㅣ) is allocated.
- 44 That is, in the numeric key 1 among the allocated consonant key, it is ㄱ this respective point-to-point mapping is allocated in the numeric key 2 in the numeric key 4 in the numeric key 5 in the numeric key 7 in the numeric key 0. And it is allocated among the allocated vowel key in the numeric key 3 in ㅡ, and the numeric key 9 with ㅣ this.
- 45 And as to the additional letter stroke key (*) and book on strategy key (#), it is combined with the consonant key (the single consonant, and the complex consonant) which are not allocated in the consonant key to be inputted. And the numeric key 0 is the key classifying the when necessary letter heat.
- 46 An input by a combination of the additional letter stroke key and consonant key concretely this the Hangul single consonant is inputted are same as those of the table 1.

Table 1

Consonant	Number key input
ㄱ	1 No. key
ㅋ	2 No. key

ㄷ	* The key and 2 No. key
ㄹ	4 No. key
ㄱ	5 No. key
ㅅ	* The key and 5 No. key
ㅈ	7 No. key
ㅊ	8 No. key
ㅊ	0 key
ㅊ	* With the key and 0 key
ㅊ	* The key and 1 No. key
ㅊ	*With the key* The key and 2 No. key
ㅊ	*With the key* The key and 5 No. key
ㅊ	* The key and 8 No. key

- 47 And the other consonant letters which adds a stroke to the simplified vowel characters by using the additional stroke key (*) for the basis consonant letter (ㄱ, ㄴ, ㄷ, ㄹ, ㅁ) of Hangul or is transformed into is inputted. The inputted to ㄱ → ㅋ, ㄴ → ㄷ → ㅌ, ㄷ → ㅈ → ㅊ, ㅁ → ㅂ → ㅍ, ㅈ → ㅊ, ㅊ → ㅊ.
- 48 Moreover, the Hangul complex consonant 'ㄱ' which is not allocated by using 7 consonant keys, the additional stroke key (*) and book on strategy key (#) is inputted to the combination of the book on strategy key (#) and key. 'ㄴ' is inputted to the combination of 7 No. key and 1 No. key. 'ㄷ' is inputted to the combination of 0 key key. And 'ㄹ' is inputted to 2 No. key, the additional letter stroke key (*) and combination of 8 No. key. And 'ㄷ' inputted to the additional letter stroke key (*), 2 No. key and combination of the book on strategy key (#). And inputted to the combination of 1 No. key and 4 No. key. 'ㄷ' is inputted to 4 No. key, the additional letter stroke key and combination of 5 No. key. And 'ㄷ' is inputted to the combination of 7 No. key and 4 No. key. 'ㄷ' is inputted to combination of 4 No. key and additional letter stroke key (*) and additional letter stroke key (*) and 2 No. key. is inputted to the combination of 4 No. key and additional letter stroke key (*) and additional letter stroke key (No. key. 'ㄷ' is inputted to 4 No. key, the additional letter stroke key (*) and combination of 8 No. key. And 'ㄷ' inputted to the additional letter stroke key (*), 5 No. key and combination of the book on strategy key (#). 'ㄷ' is inputted to the additional letter stroke key (*), 5 No. key and combination of 7 No. key. 'ㄷ' is inputted to the combination of the book on strategy key (#) and 7 No. key. And 'ㄷ' is inputted to the combination of the book on strategy key (#) and 0 No. key.
- 49 Here, the double consonant ㄱ, ㄴ, and ㄷ are combined to the successive combination of the book on strategy key and each consonant key (ㄱ, ㄴ, ㄷ). And 'ㄷ', and ㅈ are inputted to the additional letter stroke key (*), each consonant key (ㄱ, ㄴ) and the successive combination of the book on strategy key (#). As to this Hangul consonant, after making the correspond consonant the additional letter stroke key and consonant key, it prescribes book on strategy key and it creates the specific complex consonant.
- 50 The deformation which is not designated for, and the consonant key 1,2,4,5,7,8,0 No. key, the additional letter stroke key (*) and combination of the book on strategy key (#) to the consonant key and the consonant which a stroke added are inputted.
- 51 Moreover, in order to input the Hangul single vowel, and a diphthong, it assembles to ㅏ and it inputs ㅑ. This is the same like the bar shown in the table 2.

Table 2

Vowel	Number key input
-------	------------------

ㅏ	9 key and 6 key
ㅑ	9 key, 6 key and 6 key
ㅓ	6 key and 9 key
ㅕ	6 key, 6 key and 9 key
ㅗ	3 key and 6 key
ㅛ	3 key, 3 key and 6 key
ㅜ	6 key and 3 key
ㅠ	6 key, 3 key and 3 key
ㅡ	6 key
ㅣ	9 key

- 52 As shown in table 2, an input is possible through the combination of the first allocated to the vowel key of 3 th similarity single vowel a vowel or the third vowel. By using the method which the vowel of ㅏ, ㅑ, ㅓ, ㅕ, ㅗ, ㅛ, ㅜ, ㅠ which is a diphthong is illustrated in the table 2, it inputs.
- 53 That is, 'ㅏ' is inputted to 9 key, 6 key and the successive combination of 9 key. And the combination are inputted the successive combination of 9 key and 6 key and 6 key and 9 key. And 'ㅑ' is inputted to 6 key, 9 key and the successive combination of 9 key. And 'ㅓ' is inputted to the successive combination of 6 key and 6 key and 9 key. And 'ㅕ' is inputted to the successive combination of 3 key and 6 key and 9 key and 6 key. And 'ㅗ' is inputted to the successive combination of 6 key and 3 key and 9 key and 6 key and 9 key. And 'ㅛ' is inputted to 6 key, 3 key and the successive combination of 9 key. And 'ㅜ' is inputted to 3 key, 6 key and the successive combination of 9 key. And 'ㅠ' is inputted to the successive combination of 3 key and 6 key and 6 key and 9 key and 9 key. And 'ㅡ' is inputted to the successive combination of 9 key and 3 key.
- 54 As to this vowel of Hangeul, the single vowel and the diphthong in which the deformation and stroke are added combination of the vowel allocated in advance of 3 are inputted.
- 55 In the meantime, as to the consonant keys (1,2,4,5,7,8,0) described in the above, 2 column, and vowel keys arranged in the left side in the right side to 1 heat. The additional letter stroke key (*) assigns to the bottom left line selection and the book on strategy key (#) assigns to the bottom of the right side for the Hoo selection. In by using the whole key matrix, it makes a convenience and clarity good in the hangul input of a user.
- 56 In case the letter heat called "for example" this tries to be inputted with, and the consonant of Hangeul and vowel at a stretch, "example" is inputted to the successive combination of 8 key and 6 key and 6 key and 9 key. And combined to 4 key, 3 key and the successive input of 4 key. "****" is inputted to the additional letter stroke key and the successive combination of 4 key. And "side" is inputted to the successive combination of 5 key and 6 key and 2 key, the letter heat called this which in this way, is combined "for example" can know to be complete the key input of the total 14 burn. Here, as to "example", if wants to let out 9 No. key with the unified Korean code making ㅏ, 'ㅑ' is inputted and 'ㅑ' is completed.
- 57 According to the Korean input inner automata, and the letter heat by the consecutive character element are on the liquid crystal display as the letter heat in order to be converted from the Hangeul combination type code unified Korean code.
- 58 Referring to the figure concretely, it decides to illustrate for the second preferred embodiment of the present invention. Fig. 5 is a drawing showing the key matrix for showing the second preferred embodiment of the present invention.
- 59 The second preferred embodiment of the present invention is the point-to-point mapping and it assigns the th

(—, ·, |) through the first to numeric keys (1,2,3) of the key input unit (2). It is the point-to-point mapping and assigns a consonant to keys (4,5,6,7,8,9,0) of 7. And the additional letter stroke key and book on strategy key are prepared in the rest key.

- 60 If a consonant due to the arrangement of this consonant and vowel and method for inputting vowel are illustrated, vowels which are not allocated to a combination are inputted to the third vowel (—, ·, |) allocated in keys (the upper end 1 row of the key matrix on a one-to-one basis through the first.
- 61 Referring to Fig. 5, if the configuration of the character elements allocated to numeric key matrix is looked at, allocated in the numeric key 3 with respective one-to-one and a vowel is inputted to the numeric key 1 to —, a numeric key 2 to the mode like the first preferred embodiment.
- 62 Here, in the numeric key 4, by being allocated in the numeric key 0 with a this respective one-to-one and pre the character key, the correspond consonant is inputted to the numeric key 5 to the numeric key 6 to the num to the numeric key 8 to the numeric key 9. The consonant which is not allocated is inputted by and, these combinations, the additional letter stroke key and combination of the book on strategy key.
- 63 And as the third preferred embodiment of the present invention, Fig. 6 is allocated in the numeric key 1,2,3 of input unit (2) with —. And it is allocated in the numeric key 4,5,6,7,8,9,0 with respective one-to-one. And the a letter stroke key and book on strategy key are prepared in the key of 2 rests.
- 64 Here, in the number 7, if □ key is pressed after pressing the additional letter stroke key because it is allotted, with ≡ this. If wants to be yellowish and let out the book on strategy key, it is input with □ this. And if the additional letter stroke key is pressed and it is yellowish, it is input with ≡ this. If the book on strategy key is pressed after inputting, it ≡ this is input. The vowel key of 3 these and consonant key of 7 are used. It inputs with the mode first preferred embodiment of the present invention and the consonant of Hangeul and vowel are inputted.
- 65 In this way, the Hangeul essentiality vowel is assigned to the key of 3 with one to one. The Hangeul essentiality consonant is assigned to the key of 7 with one to one and elated by notes being allocated, a consonant is input the combination of the book on strategy key and additional letter stroke key.

► Effects of the Invention

- 66 As illustrated in the above, the present invention has the effect that a consonant allocated to a user is the key the mobile communications terminal the essentiality vowel the essentiality consonant is assigned with the ord Korean to the key of 3 to the key of 7 and vowel can be easily learned.

Scope of Claims

Claim[1] :

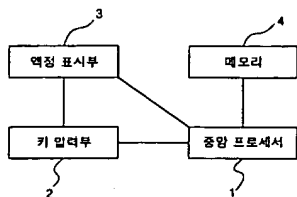
- 67 The input method of the Korean alphabet of the mobile communications terminal of the input method of the Korean alphabet using a consonant allocated to the key matrix of the mobile communications terminal and vowel, where first vowel, the second vowel, and the third vowel are assigned to the vowel key of 3 so that a vowel be input combination according to the Hangeul handwriting order; and a consonant is input elated by notes being allocated former of the seventh consonant, corresponding to the consonant key of 7 on a one-to-one basis through the consonant, and Hoo by the selective combination of the book on strategy key and the pressed additional letter key so that the consonant allocated in the character key in advance be input.

Claim[2] :

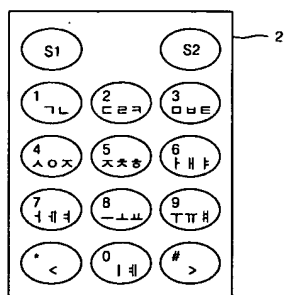
- 70 The input method of the Korean alphabet of the mobile communications terminal of claim 1, wherein the consonant | vowel, 7 is made with —.

Claim[3] :

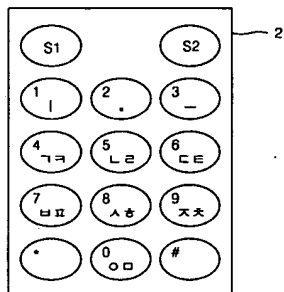
- 72 The input method of the Korean alphabet of the mobile communications terminal of claim 1, wherein vowel ke arrange to the left right column of the mobile communications terminal.



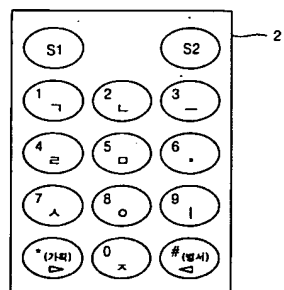
● Fig. 1



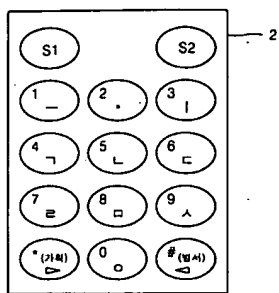
● Fig. 2



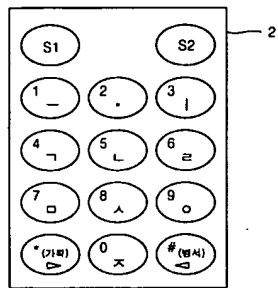
● Fig. 3



● Fig. 4



● Fig. 5



● Fig. 6